

THAT WHICH IS CLAIMED IS:

Sub AR  
1. A method for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said method comprising:

5 (a) providing patient information to a computing device comprising:

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10 a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

15 a second knowledge base comprising a plurality of expert rules for evaluating and selecting a therapeutic treatment regimen for said disease or medical condition;

20 a third knowledge base comprising advisory information useful for the treatment of a patient with different constituents of said different therapeutic treatment regimens; and

(b) generating in said computing device a listing of available therapeutic treatment regimens for said patient; and

25 (c) generating in said computing device advisory information for one or more therapeutic treatment regimens in said listing based on said patient information and said expert rules.

2. A method according to claim 1, further

comprising the steps of:

(d) entering a user-defined therapeutic treatment regimen for said disease or medical condition that is not included in said first knowledge base;

(e) generating in said computing device advisory information for said user-defined combination therapeutic treatment regimen.

3. A method according to claim 1, further comprising the steps of:

(f) entering a non-recommended therapeutic treatment regimen for said disease or medical condition that is included in said first knowledge base but not recommended from said listing; and

(g) generating in said computing device advisory information for said non-recommended therapeutic treatment regimen, said advisory information including at least one reason for non-recommendation of said therapeutic treatment regimen.

4. A method according to claim 1, said patient information comprising gender, age, weight, CD4 information, viral load information, HIV genotype and phenotype information, hemoglobin information, neuropathy information, neutrophil information, pancreatitis, hepatic function, renal function, drug allergy and intolerance information, and information for drug treatments for other conditions.

5. A method according to claim 1, said patient information including prior therapeutic treatment regimen information.



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~~10~~  
~~11~~. A method according to claim ~~8~~<sup>7</sup>, wherein said therapeutic treatment regimen includes a protease inhibitor, and said contraindicated drug is terfenadine.

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~~12~~. A method according to claim ~~8~~<sup>7</sup>, wherein said therapeutic treatment regimen includes indinavir and said contraindicated drug is cisapride.

~~12~~  
~~13~~. A method according to claim 1, wherein said known disease or medical condition is one where multiple prophylactic or therapeutic treatment regimens are available to be used singly or in combination in the treatment of said disease.

~~13~~  
~~14~~. A method according to claim 1, wherein said known disease or medical condition is a cardiovascular disease.

~~14~~  
~~15~~. A method according to claim 1, wherein said known disease or medical condition is a pulmonary disease.

~~15~~  
~~16~~. A method according to claim 1, wherein said known disease or medical condition is a neurologic disease.

~~16~~  
~~17~~. A method according to claim 1, wherein said known disease or medical condition is cancer.

~~17~~  
~~18~~. A method according to claim 1, wherein said known disease or medical condition is a urinary

tract infection.

18  
~~19~~

A method according to claim 1, wherein said known disease or medical condition is hepatitis.

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~~20~~

A method according to claim 1, wherein said known disease or medical condition is HIV-1 infection.

21. A method according to claim 1, wherein said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

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~~22~~

A method according to claim 1, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

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~~23~~

A method according to claim 1, further comprising the step of:

(d) accessing, via said computing device, information for one or more therapeutic treatment regimens from a drug reference source.

24. A system for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said system comprising:

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(a) a computing device comprising:

a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

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a second knowledge base comprising a plurality of expert rules for selecting a therapeutic treatment regimen for said disease or medical condition;

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a third knowledge base comprising advisory information useful for the treatment of a patient with different constituents of said different therapeutic treatment regimens; and

20

(b) means for providing patient information to said computing device;

(c) means for generating in said computing device a listing of therapeutic treatment regimens for said patient; and

25

(d) means for generating in said computing device advisory information for one or more therapeutic treatment regimens in said listing based on said patient information and said expert rules.

~~24~~  
25. A system according to claim ~~24~~<sup>23</sup>, further comprising:

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(e) means for entering a user-defined therapeutic treatment regimen for said disease or medical condition that is not generated or displayed via said first knowledge base;

(f) means for generating in said computing device advisory information for said user-defined combination therapeutic treatment regimen.

~~25~~  
26. A system according to claim ~~24~~<sup>23</sup>, further comprising:

(f) means for entering a non-recommended

therapeutic treatment regimen for said disease or  
5 medical condition that is included in said first  
knowledge base but not recommended from said listing;  
and

(g) means for generating in said computing  
device advisory information for said non-recommended  
10 therapeutic treatment regimen, said advisory  
information including at least one reason for non-  
recommendation of said therapeutic treatment regimen.

27. A system according to claim 24, said  
patient information comprising gender, age, weight, CD4  
information, viral load information, HIV genotype and  
phenotype information, hemoglobin information,  
5 neuropathy information, neutrophil information,  
pancreatitis, hepatic function, renal function, drug  
allergy and intolerance information, and information  
for drug treatments for other conditions.

28. A system according to claim 24, said  
patient information including prior therapeutic  
treatment regimen information.

29. A system according to claim 24, wherein  
said listing of available therapeutic treatment  
regimens for said patient comprises a ranked listing of  
available therapeutic treatment regimens for said  
5 patient.

30. A system according to claim 24, wherein  
said patient information includes prior patient  
information stored in said computing device.







said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

4.3  
45. A system according to claim 23, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

4.4  
46. A system according to claim 23, further comprising:

(e) means for accessing, via said computing device, information for one or more therapeutic treatment regimens from a standard drug reference source.

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Sub A8  
5 47. A computer program product for guiding the selection of a therapeutic treatment regimen for a patient with a known disease or medical condition, said computer program product comprising a computer usable storage medium having computer readable program code means embodied in the medium, the computer readable program code means comprising:

(a) computer readable program code means for generating a computing device comprising:

10 a first knowledge base comprising a plurality of different therapeutic treatment regimens for said disease or medical condition;

15 a second knowledge base comprising a plurality of expert rules for selecting a therapeutic treatment regimen for said disease or medical condition;

a third knowledge base comprising

advisory information useful for the treatment  
of a patient with different constituents of  
said different therapeutic treatment  
regimens; and

(b) computer readable program code means for providing patient information to said computing device;

(c) computer readable program code means for generating in said computing device a listing of available therapeutic treatment regimens for said patient; and



information clinically useful to implement a corresponding therapeutic treatment regimen.

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54. A computer program product according to claim 47 wherein said computing device comprises a fourth knowledge base comprising patient therapeutic treatment regimen history, said advisory information including previous therapeutic treatment regimen information extracted from said fourth knowledge base.

50 52  
55. A computer program product according to claim 53, wherein said known disease or medical condition is HIV-1 infection, said therapeutic treatment regimen includes antiretroviral drugs, and said therapeutic treatment regimen includes contraindicated or potentially adversely interacting non-antiretroviral drugs.

50 53  
56. A computer program product according to claim 53, wherein said therapeutic treatment regimen includes a protease inhibitor, and said contraindicated drug is terfenadine.

50 54  
57. A computer program product according to claim 53, wherein said therapeutic treatment regimen includes indinavir and said contraindicated drug is cisapride.

45 55  
58. A computer program product according to claim 47, wherein said known disease or medical condition is one where multiple prophylactic therapeutic treatment regimens are available to be used

5        singly or in combination in the treatment of said  
disease or medical condition.

45 56  
58. A computer program product according to claim 47, wherein said known disease or medical condition is a cardiovascular disease.

~~45~~<sup>57</sup> 60. A computer program product according to claim ~~47~~, wherein said known disease or medical condition is a pulmonary disease.

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45 61. A computer program product according to  
claim 47, wherein said known disease or medical  
condition is a neurologic disease.

~~45~~<sup>59</sup><sub>62</sub>. A computer program product according to claim ~~47~~, wherein said known disease or medical condition is cancer.

45, 60, 63. A computer program product according to claim 47, wherein said known disease or medical condition is a urinary tract infection.

~~45~~ <sup>61</sup> 64. A computer program product according to claim ~~47~~, wherein said known disease or medical condition is hepatitis.

45 62  
65. A computer program product according to claim 47, wherein said known disease or medical condition is HIV-1 infection.

66. A computer program product according to

claim 47, wherein said knowledge base comprises a plurality of different combination therapeutic treatment regimens.

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45 67. A computer program product according to claim 47, wherein drug dosage information is recommended and adjusted if necessary depending upon said patient information.

68. A computer program product according to claim 47, further comprising:

(e) computer readable program code means for accessing, via said computing device, information for one or more therapeutic treatment regimens from a standard drug reference source.

66  
45 69. A computer program product according to claim 47, wherein said listing of available therapeutic treatment regimens for said patient is a ranked listing of available therapeutic treatment regimens for said patient.